# GCA30 型非固体电解质钽电容器

**执行标准：GJB1312A-2001和Q/MM20095-2001**

## 特征与用途

- 银外壳封装、半密封、圆柱形、轴向引出、埋焊点结构、外套绝缘套管、极性电容器、体积小、便于安装使用；
- 电性能优良稳定、可靠性高、漏电流小、寿命长、执行标准严酷度要求高于GZJ840628“七专”技术条件的规定；
- 适用于兵器、电子、通讯等领域军用及民用电子设备的直流或脉动电路。
- **订货书写格式：**GCA30-40V-100μF-K-2000只。

## 主要技术性能

温度范围：-55℃～125℃（＞85℃时施加降额电压使用）；
额定电压、降额电压、标称电容量：见表2；
电容量允许偏差：±10%、±20%；
室温漏电流：$I_0 \leqslant 0.001 C_R U_R$（μA）或1μA（取大者）；
高温(85℃、125℃)漏电流：$I \leqslant 0.008 C_R U_R$（μA）或8μA(取大者)；
损耗角正切(tgδ)：不超过表2规定；
负温（-55℃）阻抗：不超过表2规定；
外形尺寸和最大重量：见图1和表1。

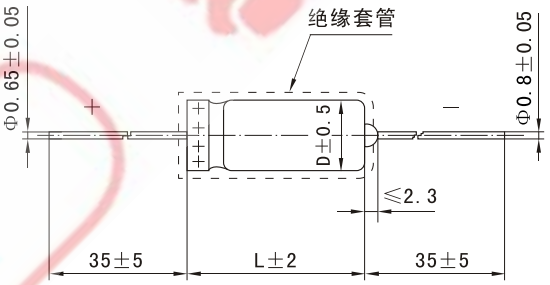


图1

**表1 电容器的外形尺寸和最大重量**

| 外壳代号 | 最大重量 g | 外形尺寸 mm | |
|---|---|---|---|
| | | D | L |
| 0 | 3 | 5 | 10 |
| 1 | 4 | 5 | 14 |
| 2 | 5 | 6 | 16 |
| 3 | 7 | 8 | 16 |
| 4 | 10 | 8 | 22 |
| 5 | 14 | 10 | 22 |
| 6 | 17 | 10 | 25 |
| 7 | 20 | 10 | 30 |

注：外套绝缘套管后直径D最大增加0.4mm，长度L最大增加1.6mm。

**表2 额定电压、降额电压、标称电容量、外壳代号和主要电性能**

| 额定电压 ($U_R$) V | 降额电压 ($U_C$) V | 标称电容量 ($C_R$) μF | 外壳代号 | 损耗角正切 25℃ 85℃ 125℃ % | 阻抗 -55℃ 100Hz Ω | 额定电压 ($U_R$) V | 降额电压 ($U_C$) V | 标称电容量 ($C_R$) μF | 外壳代号 | 损耗角正切 25℃ 85℃ 125℃ % | 阻抗 -55℃ 100Hz Ω | 额定电压 ($U_R$) V | 降额电压 ($U_C$) V | 标称电容量 ($C_R$) μF | 外壳代号 | 损耗角正切 25℃ 85℃ 125℃ % | 阻抗 -55℃ 100Hz Ω |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6.3 | 4 | 1.0 | 0 | 6 | 1800 | 10 | 6.3 | 1000 | 6 | 50 | 25 | 25 | 16 | 330 | 5 | 30 | 45 |
| | | 1.5 | 0 | 6 | 1400 | | | 1200 | 6 | 60 | 25 | | | 470 | 6 | 40 | 40 |
| | | 2.2 | 0 | 6 | 1100 | | | 1500 | 6 | 60 | 20 | | | 680 | 7 | 35 | 35 |
| | | 3.3 | 0 | 6 | 700 | | | 2200 | 6 | 70 | 20 | | | 1000 | 7 | 40 | 30 |
| | | 4.7 | 0 | 6 | 500 | 16 (15) | 10 | 1.0 | 0 | 6 | 1800 | | | 1200 | 7 | 50 | 25 |
| | | 6.8 | 0 | 8 | 350 | | | 1.5 | 0 | 6 | 1400 | 40 | 25 | 1.0 | 0 | 6 | 1800 |
| | | 10 | 0 | 8 | 260 | | | 2.2 | 0 | 6 | 1100 | | | 1.5 | 0 | 6 | 1400 |
| | | 15 | 0 | 10 | 200 | | | 3.3 | 0 | 6 | 700 | | | 2.2 | 0 | 6 | 1100 |
| | | 22 | 0 | 10 | 180 | | | 4.7 | 0 | 6 | 500 | | | 3.3 | 0 | 6 | 700 |
| | | 33 | 0 | 12 | 125 | | | 6.8 | 0 | 8 | 350 | | | 4.7 | 0 | 6 | 450 |
| | | 47 | 0 | 15 | 125 | | | 10 | 0 | 8 | 260 | | | 6.8 | 0 | 8 | 350 |
| | | 68 | 0 | 18 | 125 | | | 15 | 0 | 10 | 180 | | | 10 | 0 | 8 | 260 |
| | | 100 | 1 | 20 | 100 | | | 22 | 0 | 10 | 150 | | | 15 | 0 | 10 | 175 |
| | | 150 | 1 | 30 | 80 | | | 33 | 0 | 12 | 110 | | | 22 | 1 | 12 | 140 |
| | | 220 | 2 | 40 | 70 | | | 47 | 1 | 12 | 90 | | | 33 | 1 | 12 | 110 |
| | | 330 | 2 | 40 | 60 | | | 68 | 1 | 18 | 80 | | | 47 | 2 | 15 | 80 |
| | | 470 | 3 | 50 | 50 | | | 100 | 2 | 20 | 70 | | | 68 | 2 | 15 | 75 |
| | | 680 | 4 | 50 | 35 | | | 150 | 2 | 30 | 60 | | | 100 | 3 | 20 | 65 |
| | | 1000 | 5 | 60 | 25 | | | 220 | 3 | 40 | 55 | | | 150 | 4 | 20 | 50 |
| | | 1200 | 5 | 60 | 25 | | | 330 | 4 | 40 | 45 | | | 220 | 5 | 25 | 45 |
| | | 1500 | 6 | 60 | 20 | | | 470 | 5 | 40 | 40 | | | 330 | 6 | 25 | 35 |
| | | 2200 | 6 | 70 | 20 | | | 680 | 6 | 45 | 35 | | | 470 | 6 | 30 | 35 |
| 10 | 6.3 | 1.0 | 0 | 6 | 1800 | | | 1000 | 7 | 50 | 30 | | | 680 | 7 | 40 | 35 |
| | | 1.5 | 0 | 6 | 1400 | | | 1200 | 7 | 50 | 25 | | | 1000 | 7 | 45 | 30 |
| | | 2.2 | 0 | 6 | 1100 | | | 1500 | 7 | 60 | 20 | 50 | 30 | 1.0 | 0 | 6 | 1800 |
| | | 3.3 | 0 | 6 | 700 | 25 | 16 | 1.0 | 0 | 6 | 1800 | | | 1.5 | 0 | 6 | 1400 |
| | | 4.7 | 0 | 6 | 500 | | | 1.5 | 0 | 6 | 1400 | | | 2.2 | 0 | 6 | 1100 |
| | | 6.8 | 0 | 8 | 350 | | | 2.2 | 0 | 6 | 1100 | | | 3.3 | 0 | 6 | 700 |
| | | 10 | 0 | 8 | 250 | | | 3.3 | 0 | 6 | 700 | | | 4.7 | 0 | 6 | 500 |
| | | 15 | 0 | 10 | 200 | | | 4.7 | 0 | 6 | 500 | | | 6.8 | 0 | 8 | 350 |
| | | 22 | 0 | 10 | 175 | | | 6.8 | 0 | 8 | 300 | | | 10 | 1 | 8 | 260 |
| | | 33 | 0 | 12 | 125 | | | 10 | 0 | 8 | 260 | | | 15 | 1 | 10 | 175 |
| | | 47 | 0 | 15 | 100 | | | 15 | 0 | 10 | 175 | | | 22 | 2 | 12 | 150 |
| | | 68 | 1 | 18 | 80 | | | 22 | 0 | 10 | 150 | | | 33 | 2 | 12 | 110 |
| | | 100 | 1 | 20 | 60 | | | 33 | 1 | 12 | 110 | | | 47 | 3 | 15 | 80 |
| | | 150 | 2 | 30 | 55 | | | 47 | 1 | 12 | 80 | | | 68 | 4 | 15 | 75 |
| | | 220 | 2 | 40 | 45 | | | 68 | 2 | 20 | 75 | | | 100 | 5 | 20 | 65 |
| | | 330 | 3 | 45 | 40 | | | 100 | 2 | 20 | 70 | | | 150 | 6 | 20 | 50 |
| | | 470 | 4 | 50 | 35 | | | 150 | 3 | 25 | 60 | | | 220 | 6 | 25 | 45 |
| | | 680 | 5 | 50 | 30 | | | 220 | 4 | 30 | 55 | | | 330 | 7 | 25 | 45 |

**表2（续） 额定电压、降额电压、标称电容量、外壳代号和主要电性能**

| 额定电压 ($U_R$) V | 降额电压 ($U_C$) V | 标称电容量 ($C_R$) μF | 外壳代号 | 损耗角正切 25℃ 85℃ 125℃ % | 阻抗 -55℃ 100Hz Ω | 额定电压 ($U_R$) V | 降额电压 ($U_C$) V | 标称电容量 ($C_R$) μF | 外壳代号 | 损耗角正切 25℃ 85℃ 125℃ % | 阻抗 -55℃ 100Hz Ω |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 50 | 30 | 470 | 7 | 35 | 35 | 100 (90) | 63 | 1.0 | 0 | 6 | 1800 |
| | | 680 | 7 | 40 | 30 | | | 1.5 | 0 | 6 | 1400 |
| 63 | 40 | 1.0 | 0 | 6 | 1800 | | | 2.2 | 0 | 6 | 1100 |
| | | 1.5 | 0 | 6 | 1400 | | | 3.3 | 0 | 6 | 700 |
| | | 2.2 | 0 | 6 | 1100 | | | 4.7 | 0 | 6 | 500 |
| | | 3.3 | 0 | 6 | 700 | | | 6.8 | 1 | 8 | 350 |
| | | 4.7 | 0 | 6 | 500 | | | 10 | 1 | 8 | 260 |
| | | 6.8 | 0 | 8 | 350 | | | 15 | 2 | 10 | 175 |
| | | 10 | 1 | 8 | 260 | | | 22 | 2 | 10 | 150 |
| | | 15 | 1 | 10 | 175 | | | 33 | 3 | 15 | 100 |
| | | 22 | 2 | 12 | 140 | | | 47 | 4 | 15 | 70 |
| | | 33 | 2 | 12 | 100 | | | 68 | 5 | 15 | 65 |
| | | 47 | 3 | 15 | 80 | | | 100 | 6 | 20 | 60 |
| | | 68 | 4 | 15 | 65 | | | 150 | 6 | 20 | 50 |
| | | 100 | 5 | 20 | 60 | | | 220 | 7 | 20 | 40 |
| | | 150 | 6 | 20 | 50 | 125 | 75 | 0.47 | 0 | 6 | 4500 |
| | | 220 | 7 | 25 | 45 | | | 0.68 | 0 | 6 | 3000 |
| | | 330 | 7 | 25 | 35 | | | 1.0 | 0 | 6 | 1800 |
| | | 470 | 7 | 40 | 30 | | | 1.5 | 0 | 6 | 1400 |
| 75 (70) | 50 | 1.0 | 0 | 6 | 1800 | | | 2.2 | 0 | 6 | 1100 |
| | | 1.5 | 0 | 6 | 1400 | | | 3.3 | 0 | 6 | 700 |
| | | 2.2 | 0 | 6 | 1100 | | | 4.7 | 1 | 6 | 500 |
| | | 3.3 | 0 | 6 | 700 | | | 6.8 | 1 | 8 | 350 |
| | | 4.7 | 0 | 6 | 500 | | | 10 | 2 | 10 | 260 |
| | | 6.8 | 1 | 8 | 350 | | | 15 | 2 | 10 | 175 |
| | | 10 | 1 | 8 | 260 | | | 22 | 3 | 15 | 150 |
| | | 15 | 2 | 10 | 175 | | | 33 | 4 | 15 | 120 |
| | | 22 | 2 | 12 | 150 | | | 47 | 5 | 15 | 90 |
| | | 33 | 3 | 12 | 110 | | | 68 | 6 | 15 | 70 |
| | | 47 | 3 | 15 | 80 | | | 100 | 6 | 15 | 50 |
| | | 68 | 4 | 15 | 70 | | | | | | |
| | | 100 | 5 | 20 | 60 | | | | | | |
| | | 150 | 6 | 20 | 50 | | | | | | |
| | | 220 | 7 | 25 | 45 | | | | | | |
| | | 330 | 7 | 25 | 35 | | | | | | |

注：1）电容量、损耗角正切的测量频率为100Hz，$U_{_}=2.2^{0}_{-1.0}$ V， $U_{\sim}=1.0^{0}_{-0.5}$ V（有效值）；

2）测量125℃漏电流时，施加降额电压测量。